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Attorney for Applicant

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PATENT  
Docket No. 2983.2.1

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	John Spinks et al.	)
		)
Serial No.:	09/764,543	)
		) Art Unit:
Filed:	January 18, 2001	) 2151
		)
For:	NETWORK RESOURCE LOCATION DETECTION	)
	PROBE APPARATUS AND METHOD	)
		)
Examiner:	Hassan A. Phillips	)

SUPPLEMENTAL APPEAL BRIEF

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA, 22313-1450

Dear Sir:

In view of the Notice of Non-Compliant Appeal Brief mailed May 10, 2006, Appellant respectfully submits the present Supplemental Appeal Brief to replace the Amended Appeal Brief filed in relation to the above-identified patent application on March 10, 2005. Accordingly, Appellant appeals the rejection of the claims of the above-identified patent application and requests reconsideration of the claims in view of the following remarks.

**I. REAL PARTY IN INTEREST**

CENTENNIAL UK LTD. (hereinafter "Appellant") is the Real Party in Interest as the sole owner of the new technology embodied in the above-identified patent application.

**II. RELATED APPEALS AND INTERFERENCES**

To the knowledge of Appellant and its legal counsel, there are no pending appeals or interferences that will directly affect or will be directly affected by or have a bearing on the Board's decision in the pending appeal.

**III. STATUS OF CLAIMS**

Claims 1-27 are in the case. Claims 1-27 stand rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,721,818 issued on April 12, 2004 to Nakamura (hereinafter "Nakamura").

**IV. STATUS OF AMENDMENTS**

An amendment to the specification of the above-identified patent application was filed on September 27, 2004. That amendment has been entered. The claims of the above-identified patent application are yet to be amended.

**V. SUMMARY OF CLAIMED SUBJECT MATTER**

An apparatus 70 in accordance with the present invention may include a reporting module 88, typically hosted on a PC connected to a network, that is capable of querying an intelligent

network infrastructure device 76, such as a switch, a router, or a hub, to obtain end point connection information 100 corresponding to the PC 74, 96, 98. (Appellant's Spec. page 5, lines 10-13, Figures 2 and 5.) In some embodiments, end point connection information 100 obtained by the PC 74, 96, 98 may simply be the port number of the network infrastructure device 100 to which the PC 74, 96, 98 is connected via structural cabling 78. (Appellant's Spec. page 5, lines 16-18.)

The apparatus 70 may also include a correlation module 114 capable of associating the end point connection information 100 acquired by the PC 74, 96, 98 to a location identifier 182 corresponding to the physical location at which the PC 74, 96, 98 is actually installed at the physical site of the network 30. (Appellant's Spec. page 5, lines 13-16, Figures 1, 2, and 5.)

#### **VI. GROUND'S OF REJECTION TO BE REVIEWED ON APPEAL**

The rejection of claims 1-27, as being unpatentable under 35 U.S.C. § 102(e) over Nakamura, is presented for review.

#### **VII. ARGUMENT**

For a prior art reference to anticipate under 35 U.S.C. § 102, every element of the claimed invention must be identically disclosed in a single prior art reference. *Carella v. Starlight Archery & Pro Line*, 804 F.2d 135, 138 (Fed. Cir. 1986). Moreover, those elements must be arranged or connected together in that reference in the same way as specified in the patent claim. *Id.* With respect to claims 1-27, Nakamura fails to meet this test.

**A. Rejection of Claims 1, 7, 10, 16, and 19-27 Under 35 U.S.C. §102(e)**

With respect to claims 1, 7, 10, 16, and 19-27, a rejection of anticipation is improper and should be withdrawn because Nakamura does not disclose all the claim elements. Specifically, Nakamura discloses neither: 1) a reporting module configured to query a network infrastructure device; nor 2) a correlation module configured to associate end point connection information to a location. These two failings of Nakamura are independent. Accordingly, each taken by itself is sufficient to support a withdrawal of all claim rejections based on Nakamura.

**1. Nakamura Does Not Disclose a Reporting Module Configured to Query a Network Infrastructure Device**

Nakamura does not disclose the structure or function of "a reporting module configured to query a network infrastructure device," as required by Appellant. In asserting the contrary, the examiner improperly wrests Nakamura's "requesting unit, for querying another electronic apparatus" from its proper context. A full analysis reveals that Appellant's "network infrastructure device" is sufficiently different from Nakamura's "electronic apparatus" to render a reporting module configured to query the former unanticipated by a requesting unit for querying the latter.

When determining the meaning of claim terms like Appellant's "network infrastructure device," it is proper to rely on dictionary definitions, so long as the dictionary definition does not contradict any definition found in or ascertained by a reading of the patent documents. *Unitherm Food Systems v. Swift-Eckrich*, 375 F.3d 1341, 1351 (Fed. Cir. 2004). The dictionary definition of "infrastructure" is "the underlying foundation or basic framework." *Merriam-Webster Online*, <<http://www.m-w.com>> (accessed December 20, 2004). Using such a definition, Appellant's

"network infrastructure device" is a device that forms the underlying foundation or basic framework of a network.

Appellant's use of "network infrastructure device" in the specification and claims of the above-identified patent application is completely consistent with the foregoing dictionary definition. For example, Appellant specifically states that "switches<sup>1</sup>, routers<sup>2</sup>, hubs<sup>3</sup>, and the like" may be considered network infrastructure devices. (Appellant's Spec. page 13, lines 15-16.) As appreciated by those of ordinary skill in the art, switches, routers, hubs, and the like are the major components forming the underlying foundation or basic framework of a network.

Due to an inconsistent use of terminology, the meaning of Nakamura's "electronic apparatus," is more difficult to demonstrate. The term "electronic apparatus" is only used in the Field of the Invention and Summary of the Invention sections of Nakamura. Nowhere in these sections is the term explicitly defined. While one or more definitions of "electronic apparatus" may be ascertained from any suitable dictionary, Nakamura never explicitly defines the term. However, he does use it interchangeably with "device" and "node." The scope encompassed by any dictionary

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<sup>1</sup> A "switch" may be defined as, "a device designed to direct traffic among several Ethernet networks. Normally, this device has multiple ports with which to connect subnetworks and multiple processors to handle traffic through the switch." *Novell's Encyclopedia of Networking*, Novell Press, 2003, page 781.

<sup>2</sup> A "router" may be defined as, "a workstation or NetWare server that runs software to manage the exchange of information between network cabling systems." *Novell's Encyclopedia of Networking*, Novell Press, 2003, page 709.

<sup>3</sup> A "hub" may be defined as, "a network device that modifies transmission signals and permits the network to be expanded." *Novell's Encyclopedia of Networking*, Novell Press, 2003, page 345.

definition of "electronic apparatus" greatly exceeds the enablement<sup>4</sup> provided by Nakamura. Therefore, one must use the other terms such as "device" and "node," which are used interchangeably with "electronic apparatus" by Nakamura, and narrowly define it accordingly.

The following exemplary correlations found in Nakamura illustrate the interchangeability between "electronic apparatus," "device," and "node." In the Title, Nakamura states that location information is obtained from a node. At column 2, lines 47-52, Nakamura states that information identifying location is obtained from an electronic apparatus. Accordingly, "node" and "electronic apparatus" appear to be interchangeable. In the Abstract, Nakamura states that position information describes the actual locations of devices. At column 1, line 67 through column 2, line 3, Nakamura states that position information designates the location of an electronic apparatus. Accordingly, "device" and "electronic apparatus" appear to be interchangeable. At column 5, line 8, Nakamura explicitly states "devices" and "nodes" are interchangeable.

In view of the foregoing, one of ordinary skill in the art may reasonably conclude that the terms "electronic apparatus," "device," and "node," as used by Nakamura, are interchangeable names for the same item. Moreover, on page 4, lines 1-4 of the final Office Action mailed January 28, 2005, the examiner suggests that these terms are used interchangeably by Nakamura.. Accordingly, any definitions applied by Nakamura to "device" or "node" may safely and fairly be attributed to "electronic apparatus."

With respect to defining the term "device," in Figure 1, Nakamura states that a particular type of line represents the connection between "devices" and IEEE 1394 "outlets." The "devices"

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<sup>4</sup> In order to anticipate, Nakamura must be enabling, thus placing the allegedly disclosed matter in the possession of the public. *Akzo N.V. v. U.S. International Trade Commission*, 808 F.2d 1471, 1479 (Fed. Cir. 1986).

connected to "outlets" by such lines include a personal computer, a scanner, two inkjet printers, and two digital videos. Similarly, Nakamura explicitly defines "nodes" as devices such as a personal computers, digital video tape recorders, digital video disc players, digital cameras, hard disks, and monitors. (Nakamura column 5, lines 11-15.)

Accordingly, the only reasonable definition that may be given to Nakamura's "electronic apparatus" is a definition encompassing devices such as personal computers, digital video tape recorders, scanners, printers, and the like. So defined, Nakamura's "electronic apparatus" is an active device that may be connected to a network. Is it not the underlying foundation or basic framework of a network (*i.e.* not a network infrastructure device). A network will function just fine when a digital video tape recorder, digital camera, or the like is disconnected. That same network will not function just fine if a network infrastructure device (*i.e.* switch, router, hub, etc.) is disconnected.

In view of the forgoing, Appellant's "network infrastructure device" is sufficiently different from Nakamura's "electronic apparatus" to render Appellant's "reporting module" configured to query the former unanticipated by Nakamura's "requesting unit" for querying the latter.

2. **Nakamura Does Not Disclose a Correlation Module Configured to Associate End Point connection Information to a Location**

Nakamura does not disclose the structure or function of a correlation module configured to associate end point connection information to a location, as required by Appellant. In asserting the contrary, the examiner cites "a requesting unit, for querying another electronic apparatus connected to a bus network to obtain inherent information concerning the queried electronic apparatus, including, at the least, position information specifically identifying the location of the queried

electronic apparatus.” (Nakamura column 2, lines 46-51.) However, Nakamura’s requesting unit does not associate information with location, as required by Appellant. It merely obtains “inherent information” that includes “position information.” The two are one and the same and inseparable and, therefore, cannot be associated by Nakamura’s requesting unit.

Understanding why Appellant requires a correlation module reveals why Nakamura does not have one. A correlation module, as recited by Appellant, eliminates a job that would otherwise have to be performed by a user by associating end point connection information (*i.e.* network topology) to a location identifier. For example, end point connection information may include something like “port 1 of router 1.” (See Appellant’s Spec. page 5, lines 6-8.) A location identifier may include something like “port 1 of router 1 services office 201.” Standing alone, end point connection information and a location identifier are limited in their utility. However, when they are related one to another, a useful result may be produced. A correlation module may associate the end point connection information with the location identifier and learn that any device relaying “port 1 of router 1” is located in office 201.

For example, a PC utilizing Appellant’s claimed invention may be moved to a new office. When connected to the network in the new office, a reporting module loaded on the PC may query the network infrastructure asking for the PC’s end point connection information. The network infrastructure may respond with something like “port 10 on router 5.” A correlation module may then form an association and learn that the PC is in office 510. Used a reporting module in combination with a correlation module permits location identification without a user inputting the same.



In contrast, Nakamura requires a user to write position information "...in a memory of the electronic apparatus" itself. (Nakamura column 2, lines 27-28.) That is, Nakamura requires each device to be preprogrammed with position information that may be regurgitate when asked. Thus, using the invention of Nakamura, a PC would save a file or register containing something like "PC in office 201." Accordingly, if the PC were moved to office 510, the content of its location file or register would continue to inform any entity asking that is was "PC in office 201." Using the invention of Nakamura, the file or register on the PC would have to be reprogrammed each time the PC is moved.

The network infrastructure devices relied on by Appellant to provide end point connection information are installed and not typically subject to major or frequent modification thereafter. The "electronic apparatus" (*i.e.* devices, nodes) relied on by Nakamura to provide position information are regularly and frequently (sometimes daily) moved for a variety of reasons. As may be appreciated, Appellant's correlation module provides a virtually automatic ability to locate any frequently re-located device immediately upon connection to the network anywhere. This may be very valuable, particularly in networks connecting tens, hundreds, or even thousands of devices. By failing to provide a correlation module associating end point connection information to a location identifier, Nakamura requires user intervention and is, accordingly, significantly less useful than Appellant's claimed invention.

**B. Rejection of Claims 2 and 11 Under 35 U.S.C. §102(e)**

With respect to claims 2 and 11, Appellant finds no mention in Nakamura of end point connection information comprising a port number of the network infrastructure device. Placed in

the proper context, end point connection information is the response given by a network infrastructure device when queried by a reporting module. As stated hereinabove, Appellant finds no disclosure in Nakamura of a network infrastructure device being queried. Moreover, Appellant finds no disclosure in Nakamura of anything giving a port number in response to a query.

**C. Rejection of Claims 3 and 12 Under 35 U.S.C. §102(e)**

With respect to claims 3 and 12, as recited, end point connection information is the response given by a network infrastructure device when queried by a reporting module. Appellant finds no mention in Nakamura of transmitting such information to a database.

**D. Rejection of Claims 4 and 13 Under 35 U.S.C. §102(e)**

With respect to claims 4 and 13, Appellant finds no mention in Nakamura of the function or structure of an update module detecting a change in end point connection information, as required by Appellant. End point connection information is the response given by a network infrastructure device when queried by a reporting module. While Nakamura may detect changes in the connection configuration by noting any "change in the bias voltage that is applied to a communication port of each node" (Nakamura column 9, lines 60-63), changes in bias voltage and changes in query response are two separate things.

**E. Rejection of Claims 5 and 14 Under 35 U.S.C. §102(e)**

With respect to claims 5 and 14, Appellant finds no mention in Nakamura of the function or structure of an inventory module configured to detect a second network device local to the first

network device and obtain end point connection information corresponding to the second network device, as required by Appellant. Nakamura's disclosure that "each node declares the parent-child relationship through their communication ports" (Nakamura column 10, lines 51-53) is insufficient to anticipate the recited limitations.

**F. Rejection of Claims 6 and 15 Under 35 U.S.C. §102(e)**

With respect to claims 6 and 15, the examiner asserts it is inherent that the apparatus of Nakamura comprises a monitor configured to receive end point connection information from the reporting module. (Office Action mailed January 28, 2005 page 8, paragraph 8.) However, as explained hereinabove, Nakamura does not disclose querying a network infrastructure device to obtain end point connection information. Accordingly, Nakamura cannot inherently disclose a monitor receiving information Nakamura does not contemplate generating.


**G. Rejection of Claims 2 and 11 Under 35 U.S.C. §102(e)**

With respect to claims 8, 9, 17, and 18, the examiner asserts that Nakamura discloses an inventory module to transmit software and hardware configuration information. (Office Action mailed January 28, 2005 page 8, paragraph 10.) In support of this assertion, the examiner cites Nakamura column 2, lines 5-13. However, Nakamura column 2, lines 5-13 only discloses storing and transmitting "position information specifically identifying the location of the electrical apparatus." Transmitting "position information" does not anticipate transmitting software configuration information, as required by Appellant.

In view of the foregoing, Appellant asserts that Nakamura fails to anticipate Appellant's claimed invention. Accordingly, Appellant respectfully requests that the rejections of claims 1-27 be withdrawn and that claims 1-27 be allowed.

DATED this 12<sup>th</sup> day of June, 2006.

Respectfully submitted,

  
\_\_\_\_\_  
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Date: March 10, 2005

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**VIII. CLAIMS APPENDIX**

1. (original) An apparatus for physical detection and tracking of devices on a computer network, the apparatus comprising:

a processor, for executing executable data structures;

a memory device operably connected to the processor for storing the executable data structures and associated operational data structures, the executable and operational data structures comprising:

a reporting module configured to query a network infrastructure device and obtain end point connection information corresponding to a first network device; and

a correlation module configured to associate the end point connection information corresponding to the first network device to a location identifier corresponding to a physical location.

2. (original) The apparatus of claim 1, wherein the end point connection information comprises a port number of the network infrastructure device.

3. (original) The apparatus of claim 1, wherein the reporting module further comprises a communication module configured to transmit the end point connection information to a central database.

4. (original) The apparatus of claim 1, wherein the reporting module further comprises an update module configured to detect a change of end point connection information corresponding to the first network device.

5. (original) The apparatus of claim 1, wherein the reporting module further comprises an inventory module configured to detect a second network device local to the first network device and obtain end point connection information corresponding to the second network device.

6. (original) The apparatus of claim 1, further comprising a monitoring module configured to receive end point connection information from the reporting module.

7. (original) The apparatus of claim 1, wherein the correlation module further comprises a device recognition module configured to identify the nomenclature of the first network device based on product recognition records.

8. (original) The apparatus of claim 1, wherein the reporting module further comprises an inventory module configured to detect and transmit software and hardware configuration information corresponding to the first network device.

9. (original) The apparatus of claim 1, wherein the reporting module further comprises an inventory module configured to detect and transmit software and hardware configuration information corresponding to a second network device.

10. (original) An article of manufacture comprising a computer-readable memory containing data structures for programming a computer, the data structures comprising:

a reporting module configured to query a network infrastructure device and obtain end point connection information corresponding to a first network device; and

a correlation module configured to associate the end point connection information corresponding to the first network device to a location identifier corresponding to a physical location.

11. (original) The article of claim 10, wherein the end point connection information comprises a port number of the network infrastructure device.

12. (original) The article of claim 11, wherein the reporting module further comprises a communication module configured to transmit the end point connection information to a central database.

13. (original) The article of claim 12, wherein the reporting module further comprises an update module configured to detect a change of end point connection information corresponding to the first network device.

14. (original) The article of claim 13, wherein the reporting module further comprises an inventory module configured to detect a second network device local to the first network device and obtain end point connection information corresponding to the second network device.

15. (original) The article of claim 14, further comprising a monitoring module configured to receive end point connection information from the reporting module.

16. (original) The article of claim 15, wherein the correlation module further comprises a device recognition module configured to identify the nomenclature of the first network device based on product recognition records.

17. (original) The article of claim 16, wherein the inventory module is further configured to detect and transmit software and hardware configuration information corresponding to the first network device.

18. (original) The article of claim 16, wherein the inventory module is further configured to detect and transmit software and hardware configuration information corresponding to the second network device.



19. (original) A method for physical detection and tracking of devices on a computer network, the method comprising:

querying a network infrastructure device to obtain end point connection information corresponding to a first network device;

reporting the end point connection information to a central database; and

associating the end point connection information corresponding to the first network device to a location identifier corresponding to a physical location.

20. (original) The method of claim 19, wherein the end point connection information comprises a port number of the network infrastructure device.

21. (original) The method of claim 19, wherein the central database comprises device records storing end point connection information corresponding to network devices.

22. (original) The method of claim 19, further comprising detecting a change of end point connection information corresponding to the first network device and updating the central database to reflect the change.

23. (original) The method of claim 19, further comprising detecting a second network device local to the first network device and obtaining end point connection information corresponding to the second network device.

24. (original) The method of claim 19, further comprising identifying a nomenclature of the first network device based on product recognition records stored in the central database.

25. (original) The method of claim 19, further comprising detecting software and hardware configuration information corresponding to the first network device.

26. (original) The method of claim 25, further comprising transmitting the software and hardware configuration information corresponding to the first network device to the central database.

27. (original) The method of claim 19, further comprising detecting software and hardware configuration information corresponding to a second network device.

**IX. EVIDENCE APPENDIX**

None

**X. RELATED PROCEEDINGS APPENDIX**

None